

## ABSTRACT

To provide a manufacturing method of a semiconductor device and a substrate processing apparatus capable of easily controlling a nitrogen concentration distribution in a film containing a metal atom and a silicon atom, and manufacturing a high quality semiconductor device.

The method comprises a step of forming a film containing the metal atom and the silicon atom on a substrate 30 in a reaction chamber 4, and performing a nitriding process for the film, wherein the film is formed by changing a silicon concentration at least in two stages in the step of forming a film.